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FINAL REPORT

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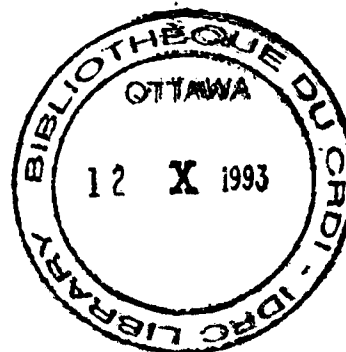
FINAL NARRATIVE TECHNICAL REPORT
FISHERIES SOCIAL SCIENCE RESEARCH NETWORK
(S.E. ASIA) PHASE 1

CENTRE FILE 3-P-82-0164

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INTRODUCTION

The Network aims to build national research capacity to address important social science issues in the development and management of the fishery resources of Southeast Asian countries. The Network assists participating countries attain this general objective in the following ways:

1. By encouraging the development of national centres which specialize in training social scientists for research on problems of fishery development and management;
2. By supporting the professional growth of a small number of social scientists in these centres through research grants, training opportunities and awards, and professional development activities;
3. By developing and improving fisheries and aquacultural economics curricula for the training of social scientists who will work on Southeast Asian fisheries;
4. By encouraging and supporting multi-disciplinary research on fishery sector problems;
5. By supporting graduate and undergraduate research within the national centres;
6. By encouraging and strengthening professional linkages between teaching, research, development, and management in the fishery sectors;
7. By developing and testing various methods of data collection and analysis to improve research on tropical multi-species, multi-gear fisheries and tropical aquaculture;
8. By assisting in the presentation of research results to research clients and users;
9. By facilitating cross-disciplinary, cross-institution, cross-national professional exchanges through appropriate conferences, workshops and meetings; and,
10. By encouraging the development of a professional association of Southeast Asian fisheries social scientists.

During Phase 1, March 1983 to March 1985, the Network consisted of the following three member institutions:

- (a) Faculty of Resource Economics and Agribusiness,
Universiti Pertanian Malaysia (UPM),
Serdang, Selangor, Malaysia;
- (b) College of Arts and Sciences,
University of the Philippines in the Visayas (UPV),
Iloilo City, Philippines; and,
- (c) Faculty of Economics and Business Management,
Kasetsart University (KU),
Bangkok, Thailand.

In addition, during Phase 1 the Network provided staff training awards to a fourth institution to help prepare it for full membership during a planned Network Phase 2. That institutions was:

- (d) Faculty of Economics,
Diponegoro University (UNDIP),
Semarang, Indonesia.

During Phase 1 the Network concentrated on three important research capacity building activities: (1) the formal academic training of research staff, (2) the development and funding of fisheries related socio-economic research by teams of researchers at UPM, UPV and KU, and, (3) the development of academic teaching programs and course curricula in fisheries management economics and aquacultural economics at UPM, UPV and KU. These three components of the Network program will be discussed below.

While the IDRC grant to ICLARM to support the Network Phase 1 formally covered the period 1 March 1983 to 31 March 1985, the training and research activities funded from this grant continued beyond the grant period. The Network requested and obtained IDRC approval to extend the period of research sub-grants to 30 June 1985 and training grants for the M.Sc. program at UPM provided during Phase 1 will continue to 30 June 1986. Details are given below.

THE TRAINING COMPONENT

The Network provided opportunities for member institutions to send academic staff to two formal training programs provided by UPM:

(1) Master of Science in Resource Economics with a specialisation in fisheries and aquacultural economics. This program covered a period of two years and included formal coursework and thesis research.

(2) Non-degree, post-graduate module consisting of the M.Sc. level courses in fisheries and aquacultural economics. This program covered a period of one semester (approximately 5 months) and was designed to provide fisheries and aquacultural economics training for professionally qualified economists and agricultural economists.

Eleven Network training fellowships were awarded during Phase 1: five for the M.Sc. program and six for the module program. Funding for the fellowships came from three main sources:

(a) Costs of the first (coursework) year of the M.Sc. program were covered by pre-project awards from the Training Division of IDRC;

(b) Costs of the second (thesis research) year of the M.Sc. program, and of four module trainees, were covered by the Social Science Division of IDRC from its Network Phase 1 grant to ICLARM; and,

(c) Costs of two module trainees were covered by a special grant for that purpose from the Ford Foundation.

At the time of writing this report (end of September 1985) none of the M.Sc. fellows have completed all requirements for the degree and all are still at UPM. On the other hand, all six of the module fellows have returned and all have contributed significantly to the research and teaching programs of their home universities. Details of the training fellowships are given in Table 1.

No funds were provided in the Phase 1 grant from IDRC for formal training activities such as curriculum development seminars and staff exchanges. However, the Network used ICLARM funds to provide teaching and research material collections of current literature in each member institution and to publish a reprint series of journal articles which has been provided in quantity to each member institution for distribution to staff and students.

From January 1982 to June 1984 the Network Coordinator was also visiting professor in fisheries economics at UPM and in this capacity he prepared the initial training program in fisheries and aquacultural economics, assisted the Faculty develop and, later, review/improve the course curricula, and shared in the teaching program. During his Network funded travel to KU, UPV and UNIP he encouraged and assisted the Network teams as they started to develop their own fisheries economics courses.

Table 1.

**NETWORK SPONSORED TRAINING ORIGINATING
DURING PHASE 1**

MEMBER INSTITUTION	NAME	BEGINNING DATE	END DATE
<u>M.Sc. Resource Economics (Fisheries specialisation) UPM</u>			
UNDIP	Drs. Mudiantono	1 April, 1983	30 June, 1985
KU	Ms. Penporn Janekarnkij	1 April, 1983	31 Aug., 1985
KU	Ms. Ratana Sungsitthisawad	1 April, 1983	30 Sept., 1985
UPM	Mr. Kamaruzzaman Abu Samah	1 April, 1984	30 June, 1986
UNDIP	Drs. Hamrolie	1 April, 1984	30 June, 1986

Non-degree post-graduate module program UPM

UPV	Ms. Nida Ty	Dec., 1983	May, 1984
KU	Mr. Thanwa Jitsanguan	Dec., 1983	May, 1984
UPV	Ms. Ebonia Seraspe	Dec., 1984	May, 1985
UPV	Mr. Benedict Posadas	Dec., 1984	May, 1985
UPV	Mr. James Torres*	Dec., 1985	May, 1986
UPV	Ms. Estela Alminaza*	Dec., 1985	May, 1986

* Funded by Ford Foundation

THE RESEARCH COMPONENT

The research component of the IDRC grant comprised two main activity types:

- (1) Program research carried out by the academic staff of the member institutions, and,
- (2) Thesis research by M.Sc. Fellows at UPM from Network member institutions, and final year undergraduate research projects at UPM carried out under the supervision of the UPM academic staff.

PROGRAM RESEARCH

The IDRC grant provided a total of CAD.149,000 to fund social science research on problems of fisheries and aquaculture by the three Network member institutions. These funds were allocated in the Memorandum of Grant Conditions as follows:

UPM	CAD.58,000
UPV	CAD.48,000
KU	CAD.43,000

IDRC approved a Network request that the period allowed for IDRC-Network-funded research be extended to 30 June, 1985.

1. Faculty of Resource Economics and Agribusiness, ... **University Pertanian Malaysia.**

UPM's major research project originated in a Workshop organised by the Network Coordinator to discuss priorities for social science research on the fishery sector of Malaysia. The Workshop was held at Fraser's Hill, 21-23 January, 1983. The list of participants is given in Table 2.

The Workshop had the following objectives:

1. To determine the level of interest of the Government agencies responsible for fisheries sector development in research on the fish marketing system and to set priorities within the general subject area;
2. To develop a detailed project statement of objectives, and a research workplan;
3. To decide how best to use the professional resources of the three universities represented in conducting the study, and an acceptable way to coordinate their individual contributions so that the overall study objectives would be achieved; and,
4. To develop the necessary project budgets.

Table 2.

**RESEARCH PRIORITIES WORKSHOP
FRASER'S HILL, 21-23 JANUARY, 1983
LIST OF PARTICIPANTS**

Department of Fisheries (DOF)

Tengku Datuk Ubaidillah b. Abd Kadir, Director-General
Rabihah Bte Mahmud, Planning Officer

Fisheries Development Authority (LKIM)

Othman Mohd Ahmed, Director-General
Hj Sabri Ahmed, Dy. Director-General (Development)
Tik b. Mustaffa, Dy. Director-General (Services)
Tan Chen Eng, Director (Planning)
Jamilah Bte Harun, Director (Marketing)
Sha'aya b. Hj Othman, Director (Fisheries Industries)
Abu Bakar b. Ali, Dy. Director (Marketing)

Universiti Kebangsaan Malaysia (UKM)

Dr. Mohd Sheffie Abd Bakar, Deen, Faculty of Economics
Kamarul Zaman b. Abd. Rahman, Faculty of Economics

Universiti Malaya (UM)

Dr. L.J. Fredericks, Dy. Vice-Chancellor
Jahara Yahaya, Faculty of Economics

Universiti Pertanian Malaysia (UPM)

Dr. Mohd Ariff Hussein, Dean, Faculty of Resource Economics and
Agribusiness (FESP)
Dr. Fatimah Arshad (FESP)
Ishak Hj Omar (FESP)
Nik Mustapha Raja Abdullah (FESP)
Dr. Brian Lockwood (FESP)*

* Network Coordinator

IDRC was provided with a copy of the Workshop report in February, 1983. The outcome of the Workshop was a request from LKIM and the Department of Fisheries for university participation in a major study of the **FISH MARKETING SYSTEM OF PENINSULA MALAYSIA** developed and coordinated by the Network Team at UPM. The study would be jointly financed by LKIM and UPM. UPM provided funds from two sources: (a) a research grant from IDRC provided to support the UPM fisheries economics program in 1982, and (b) the Network program research fund.

The Fish marketing system study was a major project which depended on obtaining important inputs from five institutions: UPM, UM, UKM, DOF and LKIM. It was planned to cover a two year period with primary data being collected systematically over a period of one year. Data collection started in August 1983 after an extended period of planning and project development. The draft report was completed by the UPM Team in September 1985 and handed over to LKIM for comments. A copy of the draft report is appended to this report.

Between August 1983 and September 1985 there were a number of problems in the management and coordination of what was already a difficult and complex study. First, the participants from UM and UKM, who were handling data collection for specific geographical areas, dropped out when leading members of their research teams left their universities. In both cases the UPM Team added the assigned tasks to their own and by about six months into the study the UPM Team had assumed full responsibility and a very heavy burden of work. Second, coordination of data collection by the UPM Team and LKIM proved to be difficult. Third, the UPM Team also experienced some changes in research personnel when the Network Coordinator transferred from UPM to ICLARM in Manila in June 1984, when Ishak Hj Omar, the first Team Leader left for Ph. D. studies in the UK in September 1984 and when Nik Mustapha Raja Abdullah, the second Team Leader left for Ph. D. studies in the USA in August 1985. Despite these setbacks and problems the UPM Team has completed a study which will have profound effects on the future of the industry in Malaysia.

A fourth problem experienced by the UPM Team in managing this large project should be mentioned here: as mentioned above the project was funded from three separate grants and the allocation of expenses between them in such a way that line item totals were observed proved impossible. One result of this is that the final UPM expenditure report on the Network grant departs substantially from the original line item breakdown, and from the revised breakdown approved by IDRC on 24 April, 1985. It should be added that due to the difficulties of managing the overall project budget (and the changes in project management personnel) the UPM Team did not reserve Network Phase I funds to cover the costs of publishing the report. This is the subject of an attached request from UPM to be allowed to draw on the unused portion of its Network research funds for this purpose, perhaps as a separate post-project grant from IDRC.

Network research funds were applied to three small projects conducted by UPM Network Team staff. These were as follows:

- (1) Mohd Ariff Hussein and Sam Strong: **A bivariate time series analysis of wholesale fish price and quantity, *Malaysian Journal of Agricultural Economics*, 1.1 (December 1984).**
- (2) Nik Mustapha Raja Abdullah and Roslan Abd. Ghaffer: **Some aspects of the short run prospects for Malaysia's fish exports**, presented at the conference of Malaysian Agricultural Economics Association (PETA), Kuala Lumpur, 14-15 May, 1985.
- (3) Nik Mustapha Raja Abdullah and Roslan Abd. Ghaffer: **Some socioeconomic determinants of fish consumption in a multi-racial society**. To be submitted to the *Malaysian Agricultural Economics Journal* in October 1985.
- (4) Mohd. Ghazali Mohayidin and Gan Kim Lan: **Factors affecting the success of freshwater fishfarming in the Segamat District**. To be submitted to the *Malaysian Agricultural Economics Journal*.

THE UPM-NETWORK PHASE 1 RESEARCH TEAM consisted of the following faculty members:

Mr. Ishak Hj Omar (Team Leader from January 1983 to August 1984)
Mr. Nik Mustapha Raja Abdullah (Team Leader from September 1984 to August 1985)
Dr. Mohd. Ariff Hussein
Dr. Fatimah Mohd Arshed,
Mr. Eric Gibbons,
Mr. Abu Hassan Md. Isa,
Mr. K. Kuperan
Mr. Tai Shzee Yew

2. Faculty of Agricultural Economics and Business Administration, Kasetsart University.

During Phase 1 the KU Team conducted three large studies, one funded fully by the Network, one funded jointly by the Network and ICLARM, and one funded by the Agriculture, Food and Nutritional Sciences Division of IDRC.

The major project was a national level study of **THE MARKETING SYSTEM OF SHELLFISH PRODUCTS**. The study was started in April 1983 and completed in June 1984. The final report, prepared in Thai and English, was produced in January 1985. A copy of this report is attached. The project was jointly funded by the Network and ICLARM.

The second study extended the work on shellfish marketing to examine **the marketing system for fresh cephalopod**. The final report of this study will be released in Thai and English in September 1985. This study was funded fully by the Network.

A third study, related to the first two, on **the economics of shellfish processing** is being funded by IDRC/AFNS. The final report will be available in September 1985.

THE KU-NETWORK PHASE 1 RESEARCH TEAM consisted of the following faculty members:

Dr. Ruangrai Tokrisna (Team Leader)
Dr. Chamnien Boonma
Dr. Marut Muangkoe
Mr. Somkit Tugsinavisutti
Mr. Sanit Kao-lan
Dr. Sarun Wattanutchariya

3. College of Arts and Sciences, University of the Philippines in the Visayas

Unlike UPM and KU where the Network affiliation is with faculties of economics, the Network involvement with UPV is with the College of Arts and Sciences (SAS). The Network Team consists of social scientists with academic training in history, psychology, sociology, public administration and economics, and thus its research program has been able to apply a number of disciplinary viewpoints to the study of the small scale capture fisheries of Iloilo Province in Central Philippines. The Team divided its project "Analysis of Institutional supports for small-scale capture fisheries in the Province of Iloilo" between two phases. The first phase consisted of a benchmark socio-economic survey of all households in six selected coastal villages. This survey was carried out by the Team to provide background and sampling frames for four separate studies which comprised the second phase of the work. The four studies are as follows:

- 1. Fish consumption in Iloilo: a consumer profile and behaviour study:** Nida R. Ty and Ebonie B. Seraspe;
- 2. Selected psychological characteristics of fishing communities:** Nuria B. Catells and Cynthia Ticao;
- 3. An evaluation of management of production and processing in municipal fisheries activities:** Tomas S. Saio and Perla D. de los Santos;
- 4. Socio-economics of marketing practices of small-scale fisheries:** Ma. Luisa E. Mabunay and Antonina Baldevia.

The preparation of final reports has been much slower than earlier predicted. Attached to this report are drafts of the completed chapters for studies 2,3 and 4 with accompanying letters from the project leaders explaining the delay. Complete drafts of these three studies are now expected to be ready in November. Study 1 has recently been handed over by the project leader Nida Ty (who left for Ph.D. studies at University of Rhode Island) to Mr. Benedict Posadas. It appears that Ty did not complete the analysis of her data and did not start to write a draft report. Nor did she inform her colleagues of the status of the study until the last few days before her departure. Posadas hopes to provide a draft in December.

In important ways the UPV Phase 1 research program was a training exercise for interested staff of the CAS. Prior to affiliation with the Network no member of CAS had been involved in fisheries related research and few had any research experience of any kind. The first phase benchmark survey served the useful purpose of bringing together in a single project the various members of the Team, but as each member saw the survey in his/her own light and expected his/her own range of data to be provided by it, the basic questionnaire became over long and the survey itself, along with the tabulation and analysis of the data, required much more effort and time than originally had been planned. This set back the start of the four individual studies and in part explains the delays in finishing the project. In addition, five Team members spent five months during Phase 1 participating in the non-degree module course at UPM and these absences were keenly felt on the research side of the Team's program.

With the devaluation of the Philippine Peso in 1984 the Peso equivalent of the CAD48,000 UPV research allocation exceeded the budgets prepared for the research projects. The Coordinator approved the purchase of an Apple computer for the use of the UPV Team and made arrangements to provide computer applications training for a member of the research staff at UP (Los Banos). As UPV used Phase 1 funds to purchase the computer it was not necessary to allocate Phase 2 funds for this purpose.

The UPV-NETWORK PHASE 1 RESEARCH TEAM consisted of the following faculty members:

Prof. Ma. Luisa E. Mabunay (Team Leader)
Prof. Nuria B. Catells
Prof. Tomas S. Sajo,
Ms. Nida R. Ty,
Mr. Benedict Posadas,
Ms. Ebonia B. Seraspe,
Ms. Cynthia Ticao,
Prof. Perla D. de los Santos,
Ms. Antonina Baldevia,
Ms. Estela Aminaza,
Mr. James Torres.

THESIS RESEARCH

1. Network supported M.Sc. students at UPM

Three M.Sc. students at UPM began their thesis research during Network Phase 1. The thesis topics are as follows:

- (1) Drs. Mudiantono (UNDIP): An economic analysis of the milkfish marketing system in Semarang Regency, Central Java, Indonesia.
- (2) Ms. Ratana Sungsitthisawad (KU): An economic analysis of the export market for Thai squid.
- (3) Ms. Penporn Janekarnkij (KU): Effects of fishery regulations on the trawler industry: a case study of trash fish production in Thailand.

2. Network supported M.Sc. theses at KU

Eight graduate students worked as research assistants with the KU Network Team on its shellfish marketing study and used study data to complete their M.Sc. theses.

- (1) Rangsit Poonsiripinyo: The green mussel marketing system of provinces in the inner part of the Gulf of Thailand.
- (2) Rungrapee Jintinpet: Economic analysis of green mussel production in association with fish traps in selected provinces of Thailand.
- (3) Nittaya Natathanapat: Economic analysis of green mussel culture in Chachoengsao, Chon Buri and Petchaburi Provinces of Thailand.
- (4) Sujitra Rodsomboon: Price analysis and marketing system of shortnecked clam in Thailand.
- (5) Wanpen Nichrowanajamrat: An analysis of marketing system of oyster in Thailand.
- (6) Ittipon Tungputtarak: Marketing system of Thai cockle.
- (7) Kalyarat Ritkaew: Marketing system of squid.
- (8) Wittawat Sarasalin: Marketing system of cuttlefish.

3. Network supported final year B.Sc. research projects at UPM

Twenty two final year undergraduates were provided with small grants between M\$1000 and M\$2000 each to conduct studies under Network Team supervision. These studies provided useful base-line data on the fishing industry in general. Many of the studies contributed to the marketing systems study of the faculty Network team. A copy of each study is attached to this report.

1983-4

- (1) Tan Huat Neo: Economic evaluation of the Ikan Bilis (anchovy) industry at Pulau Pangkor
- (2) Aw Siew Choo: The keropok (fish cracker) industry in Trengganu with emphasis on marketing
- (3) Tan Mei Ling: Supply, processing and consumption of cincaluk (prawn paste) in Malacca
- (4) Salleh b. Hashim: The economics of the purse-seine industry of Pulau Pangkor
- (5) Low Yoke Chu: The processing and marketing of trash fish of Pulau Pangkor
- (6) Tan Hooi Ling: The processing and consumption of cockles in Peninsular Malaysia
- (7) Yogarani Kanagarejah: The production and marketing of fresh cockles in Peninsular Malaysia
- (8) Gan Kim Lan: Factors affecting the success of small scale freshwater fish farming in the Segamat District
- (9) Tiong Suo Chuong: Taha utilization of by-catch of trawlers at Pulau Pangkor

1984-5

- (10) Ooi Kah Seong: The economics of brackish-water prawn production on the west coast of Peninsular Malaysia
- (11) Ng Soon Hoo: The occupational and geographical mobility of fishermen in a fishing village, Port Weld, Perak

- (12) Rafeah Mohd. Tahir: Expenditure patterns among Malay fishermen in Mersing, Johore
- (13) Khadijah Taib: Expenditure patterns among Malay fishermen in Kedai Buloh, Kelantan
- (14) Wan Zainab Wan Muda: Corak Perbelanjaan keluarga Melayu Nelay satu Kajian di Mengabang Telipot, Kuala Trengganu
- (15) Ab. Halim Hj. Ab. Rahman: Sistem Pemasaran Ikan Air Tawar di-Negeri Perak
- (16) Mashuri Mustapha: The performance of one of the Fishermen's Co-operatives in Peninsular Malaysia - a case study of the PN Kawasan Kota Bharu
- (17) Whong Wei Min: Kuala Lumpur wholesale fish market
- (18) Ishak Samdin: Fish marketing with special reference to the quality and spoilage charges
- (19) Yahya Hj. Din: Kuantan wholesale fish market
- (20) Cheong Siew Hoong: Input-output relationships in freshwater fish production in the State of Trengganu
- (21) Ahmad Jazni Mohd Johar: Fish marketing with special reference to quality and other product characteristics
- (22) Hamdzah Mohd. Daly: Kecenderungan Nelayan Mersing menyertai Rancangan Penempatan Penyabong, Mersing, Johor.

THE TEACHING COMPONENT

An important objective of the Network is to assist the member universities become national centres in the application of social science methods of analysis to the problems of the fishery sector. While this objective is stated clearly in the ICLARM proposal for IDRC support for the Network no funds were allocated for the development of appropriate university teaching programs and courses in member universities. However, the Network coordinator actively encouraged the Network teams to regard the development of appropriate teaching programs as a Network responsibility and activity and, as a result, the three universities have initiated new courses in fisheries management and aquacultural economics and plan to expend their teaching programs further during phase 2.

In addition to its M.Sc. courses (which double as non-degree module courses) UPM is now offering a special five-week course in basic economics for fisheries and aquaculture scientists. This course was offered for the first time in 1984 with special funding from the Agriculture, Food and Nutritional Sciences Division of IDRC and it catered primarily for AFNS funded project scientists from Asia.

The Network has supported the university teaching programs by providing current journal articles and other publications, including those published by ICLARM and IDRC, on a regular monthly basis. Each Team has not established a special fisheries and aquacultural economics reading room to properly support this growing collection. ICLARM also started the publication of a Reprint Series of important journal articles in fisheries and aquacultural economics for free distribution to member universities' staff and students.

The Network teams and their M.Sc. students have used ICLARM's Information Services and its DIALOG information search facility. In this way IDRC's Information Division, through its support of ICLARM's Information Services, is also assisting the Network in an important way.

NETWORK COORDINATION

The Network has been a cooperative endeavour between IDRC, ICLARM and the three member universities. It developed from an earlier joint project between IDRC, ICLARM, ADC (Agricultural Development Council) and UPM (1981-82) which established the post-graduate training programs at UPM in fisheries and aquacultural economics. The concept that led to the extension of the UPM experience to other universities in Southeast Asia through a Social Science Network for fisheries and aquaculture was developed by ICLARM after extensive discussions with IDRC and potentially interested universities in Thailand, the Philippines and Indonesia. These discussions resulted in the preparation of a six year operational plan by ICLARM and the submission, in 1982, of this plan in the form of a major proposal for financial assistance from IDRC. IDRC supported the scheme, provided funding for the first two years (Phase 1) and agreed to consider a second (Phase 2) grant in 1984.

The Network Phase 1 also involved substantial financial and professional inputs from ICLARM, particularly in the development and coordination of the Network program. In March 1983 the visiting professor in fisheries economics at UPM joined the ICLARM staff as Network coordinator. Arrangements were made for him to continue on at UPM to support the post graduate training program and UPM's fisheries economics research for a further 18 months and then to transfer to the ICLARM head office in Manila where he would be able to concentrate on the development of the Network. During the first 18 months of the Network Phase 1, therefore, Network coordination was on a part-time basis (shared with professional commitments to UPM) and was effectively split between Kuala Lumpur and Manila. This was not an ideal situation for the Network as the coordinator was unable to spend much time with the new teams at KU and UPV as they developed their research and teaching programs or at UNIP which was clearly interested in joining the Network at the first available opportunity. This situation was remedied in June 1984 when the coordinator moved to Manila but the main task at that point was to develop a program and proposal for the continuation and substantial expansion of the Network after Phase 1.

The experiences gained during the Network Phase 1, and during the two years before the Network started, show strongly and clearly that the long term institutional and professional development objectives of the Network will not be achieved without full time professional guidance from a coordinator who is backed up by the scientists and the information and administrative services of a major international fishery research centre. But equally important for the development of this Network has been the enthusiasm, professional commitment and hard work put into Network activities by the members of the UPM, UPV and KU teams, and the encouragement and financial support the Network has received from the Social Science Division of IDC.

LIST OF ATTACHED RESEARCH REPORTS

UNIVERSITI PERTANIAN MALAYSIA

1. Marketing of Fish in Malaysia (Draft Report)
2. A Bivariate Time Series Analysis of Wholesale Fish Price and Quantity: Mohd. Ariff Hussein and Sam Strong; *The Malaysian Journal of Agricultural Economics* 1(1), Dec. 1984.

3.

4. B.Sc. final year research project reports as follows:

1983-4

- (1) Tan Huat Neo: Economic evaluation of the Ikan Bilis (anchovy) industry at Pulau Pangkor
- (2) Aw Siew Choo: The keropok (fish cracker) industry in Trengganu with emphasis on marketing
- (4) Salleh b. Hashim: The economics of the purse-seine industry of Pulau Pangkor
- (5) Low Yoke Chu: The processing and marketing of trash fish of Pulau Pangkor
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- (7) Yogarani Kanagarajah: The production and marketing of fresh cockles in Peninsular Malaysia
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- (9) Tiong Suo Chuong: The utilization of by-catch of trawlers at Pulau Pangkor

1984-5

- (10) Ooi Kah Seong: The economics of brackish-water prawn production on the west coast of Peninsular Malaysia
- (11) Ng Soon Hoo: The occupational and geographical mobility of fishermen in a fishing village, Port Weld, Perak
- (12) Rafeah Mohd. Tahir: Expenditure patterns among Malay fishermen in Mersing, Johore
- (13) Khadijah Taib: Expenditure patterns among Malay fishermen in Kedai Buloh, Kelantan

- (14) Wan Zainab Wan Muda: Corak Perbelanjaan keluarga Melayu Nelay satu Kajian di Mengabang Telipot, Kuala Trengganu
- (16) Mashuri Mustapha: The performance of one of the Fishermen's Co-operatives in Peninsular Malaysia - a case study of the PN Kawasan Kota Bharu
- (17) Whong Wei Min: Kuala Lumpur wholesale fish market
- (18) Ishak Samdin: Fish marketing with special reference to the quality and spoilage charges
- (19) Yahya Hj. Din: Kuantan wholesale fish market
- (20) Cheong Siew Hoong: Input-output relationships in freshwater fish production in the State of Trengganu
- (21) Ahmad Jazni Mohd Johar: Fish marketing with special reference to quality and other product characteristics
- (22) Hamdzah Mohd. Daly: Kecenderungan Nelayan Mersing menyertai Rancangan Penempatan Penyabong, Mersing, Johor.

KASETSART UNIVERSITY

- 1. The Marketing System of Shellfish Products (Draft Report)
- 2. The Marketing System for Fresh Cephalopod (Draft Report)

UNIVERSITY OF THE PHILIPPINES IN THE VISAYAS

- 1. Socio-economics of Marketing Practices of Small-scale Capture Fisheries in Iloilo, Philippines (Incomplete Draft Report)
- 2. An Evaluation of Management of Production and Processing in Municipal Fisheries Activities in Iloilo (Draft Summary of Findings)
- 3. Fish Consumption in Iloilo: a Consumer Profile and Behavior Study (Report Outline)
- 4. Selected Psychological Characteristics of Fishermen in Selected Fishing Communities in Iloilo (Incomplete Draft Report).